



National Transportation Safety Board

Promoting Good Sleep to Enhance Transportation Safety: NTSB Investigations and Recommendations

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Board Member

AASM/SRS Meeting
June 12, 2014

Federal Agencies: Transportation

NTSB

FMCSA

FRA

NHTSA

PHMSA

DOT

MARAD

FTA

FHWA

FAA



NTSB



NTSB



- 1) determining the probable cause of transportation accidents**
- 2) making recommendations to prevent their recurrence**



NTSB



All Modes



NTSB

Independent Federal Agency: Created in 1967

- >132,000 accident investigations
- 13,500+ safety recommendations
- ~ 2,500 organizations/recipients
- 82% acceptance rate



Commercial Vehicle Collision with Passenger Vehicle and Motor Coach (Orland, CA; 4/10/14)



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NTSB Investigative Process



On-scene Investigation

Organizational Meeting
Groups and Parties
Progress meetings
Media Briefings
Press Releases

A screenshot of the NTSB Form 820 (Preliminary Report). The form includes fields for aircraft information, flight details, and a narrative section. The aircraft is identified as a Bombardier CRJ-442, and the flight is dated February 12, 2009. The narrative section describes a controlled flight into terrain (CFIT) at Buffalo-Ramapo International Airport.

Preliminary Report

Factual information



Public Hearing

Fact finding
Depositions
Witnesses
Docket



Board Meeting

Docket
Findings
Conclusions
Probable Cause
Safety Recommendations



Final Report

Government in the Sunshine Act



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Asiana 214 (July 6, 2013)

San Francisco, CA (SFO)



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MOST WANTED LIST

The Most Wanted List represents the NTSB's advocacy priorities. It is designed to increase awareness of, and support for, the most critical changes needed to reduce transportation accidents and save lives.

ELIMINATE SUBSTANCE-IMPAIRED DRIVING



A generation ago, the NTSB investigated the nation's deadliest impaired driving crash, which killed 27 and injured dozens. Since then, more than 300,000 people have perished at the hands of impaired drivers. Much more must be done to address the senseless deaths of more than 10,000 people every year.

AIRPORT SURFACE OPERATION

BUS SAFETY

ELIMINATE DISTRACTION

FIRE SAFETY

GENERAL AVIATION SAFETY

INFRASTRUCTURE

PIPELINE SAFETY

POSITIVE TRAIN CONTROL

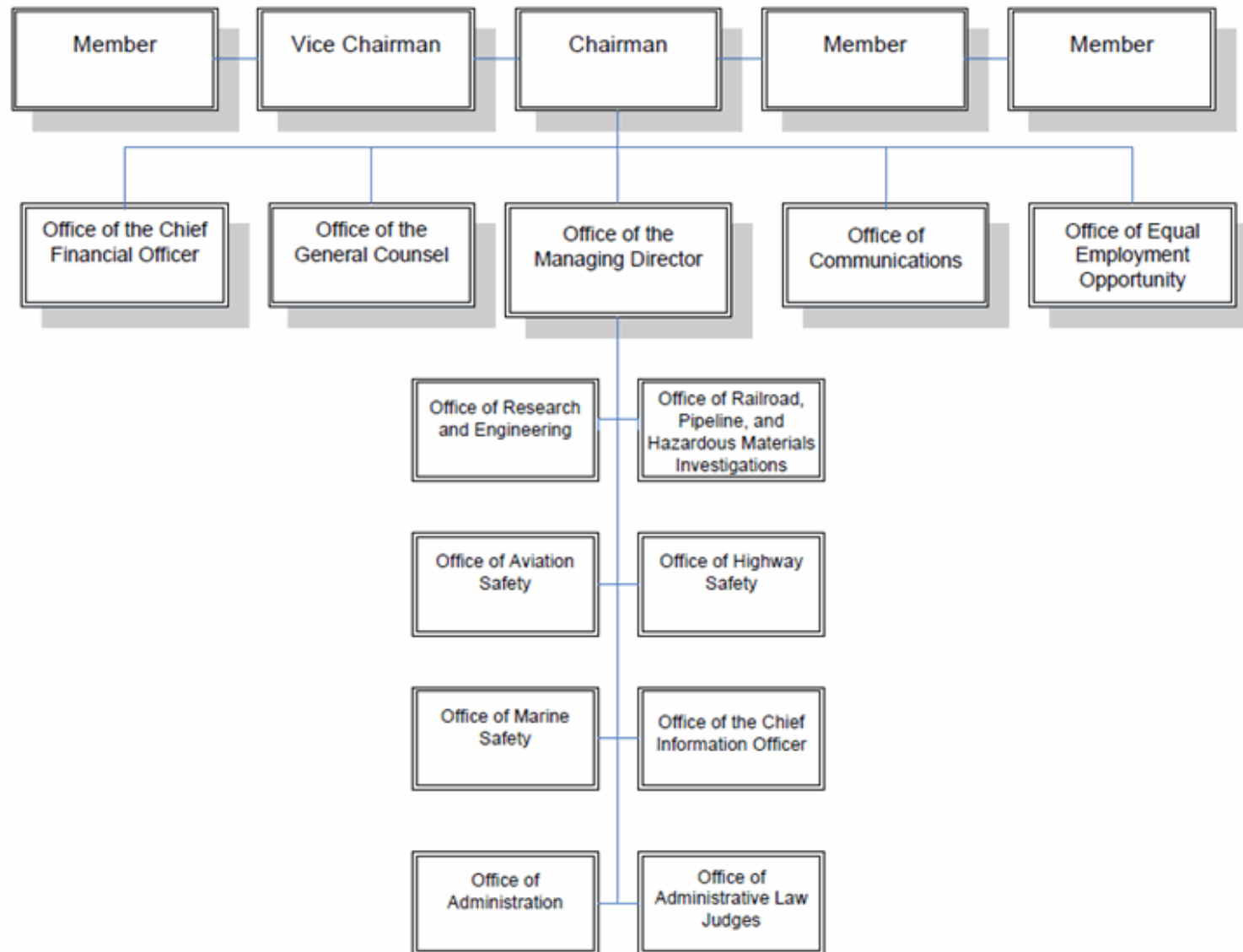
SUBSTANCE-IMPAIRED DRIVING

COLLISION AVOIDANCE



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NATIONAL TRANSPORTATION SAFETY BOARD



10 fatalities
3 serious injuries
2 minor injuries
5 no injuries

**Ford
Windstar**



**Hyundai
Sonata**

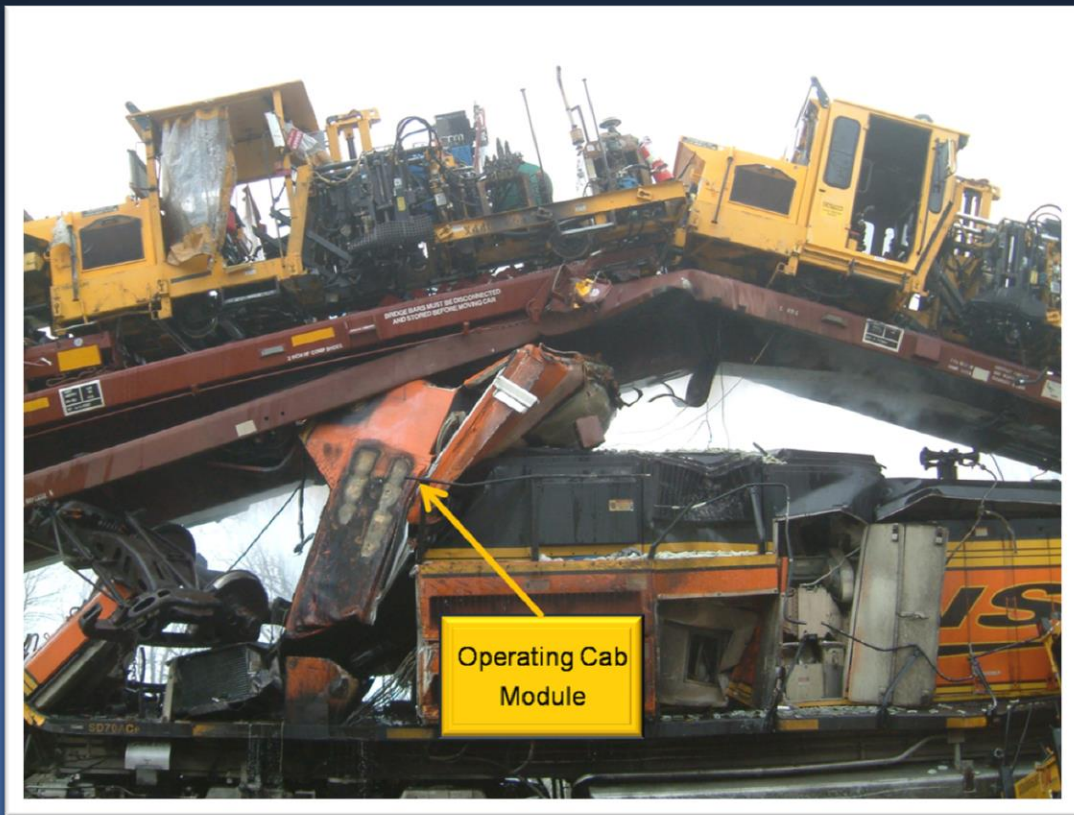
**Kia
Spectra**

Source: Oklahoma State Police

Probable Cause (fatigue)

“ . . . driver’s fatigue, caused by the combined effects of acute sleep loss, circadian disruption associated with his shift work schedule, and mild sleep apnea, which resulted in the driver’s failure to react to slowing and stopped traffic ahead by applying the brakes or performing any evasive maneuver to avoid colliding with the traffic queue. . . . ”



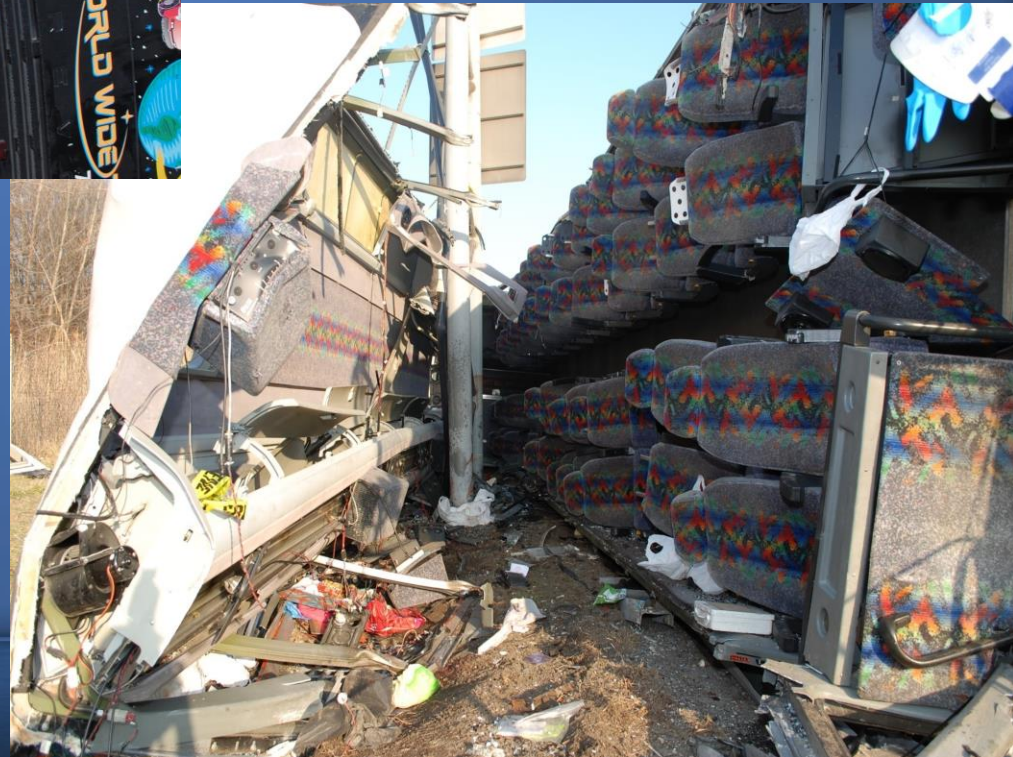


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'Bronx Bus', New York, NY (March 12, 2011)



15 fatalities
17 injuries



Owatonna, MN (July 31, 2008)



8 fatalities



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Go! Flight 1002



- early starts, multiple segment days, sleep apnea



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MOST WANTED LIST

A program to increase the public's awareness of, and support for, action to adopt safety steps that can help prevent accidents and save lives. The following are ten of the current issues.



Addressing Human
Fatigue



General Aviation
Safety



Safety Management
Systems



Runway Safety



Bus Occupant Safety



Pilot & Air Traffic
Controller
Professionalism



Recorders



Teen Driver Safety



Addressing Alcohol-
Impaired Driving



Motorcycle Safety



NTSB

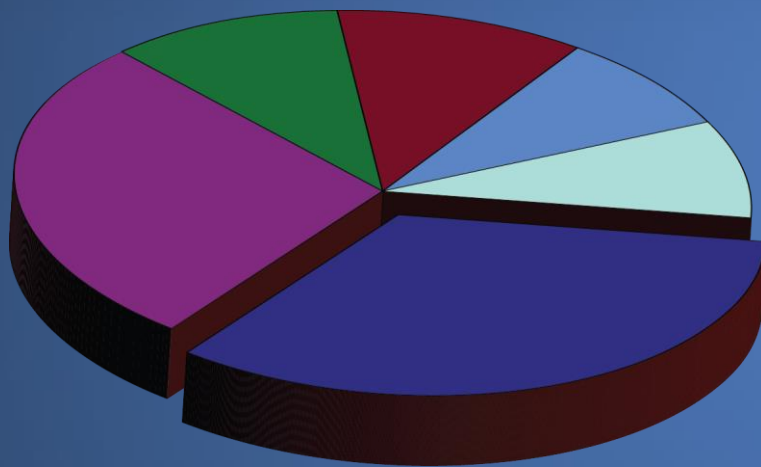
NTSB Safety Recommendations: Fatigue

- MOST WANTED 1990 - 2011
- ~200 fatigue recommendations



Complex Issue:

Requires Multiple Solutions



- Scheduling Policies and Practices
- Education/Awareness
- Organizational Strategies
- Healthy Sleep
- Vehicle and Environmental Strategies
- Research and Evaluation



Scheduling Policies and Practices

Victoria, Texas, January 2, 2008



Victoria, Texas Fire Department

- Day sleep, night drive, ~ 4 am WOCL



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NTSB Fatigue Recommendations: Hours of Service / Scheduling

- Science-based hours of service
- Allow for at least 8 hours of uninterrupted sleep
- Fatigue mitigation strategies in the hours-of-service regulations for passenger-carrying drivers who operate during the nighttime window of circadian low
- Reduce schedule irregularity and unpredictability



Sleep Apnea

Mexican Hat, UT, January 6, 2008



- 360 rollover, 50/53 ejected, 9 fatalities, OSA (-CPAP)



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NTSB Fatigue Recommendations: Sleep Apnea/Health Related

- Develop standard medical exam to screen for sleep disorders; require its use
- Educate companies and individuals about sleep disorder detection and treatment, and the sedating effects of certain drugs
- Ensure drivers with apnea are effectively treated before granting unrestricted medical certification



#40 Ceremonial Swearing In



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